

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

31 MAY 2005

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PALGE021228	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/KR 2002/002263	International filing date (day/month/year) 2 December 2002 (02.12.2002)	(Earliest) Priority Date (day/month/year)
Applicant LG ELECTRONICS INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (See Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.: 6

☒ as suggested by the applicant.

☐ None of the figures.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

A heat exchanger of a ventilating system, including heat exchange plates (50) which are laminated at a predetermined interval and divide an outdoor air path through which outdoor air passes and an indoor air path through which indoor air passes, and a plurality of embossing protrusions (54) which are formed on the outdoor air path divided by the heat exchange plates (50), for generating turbulence in the outdoor air which flows in the outdoor air path, can improve heat transfer performance by controlling development of a boundary layer by differentiating structure of the air flow of an air path through which indoor air passes and an air path through which outdoor air passes.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AT 2002/002263

CLASSIFICATION OF SUBJECT MATTER

IPC⁷: F28F 3/04, F28D 9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷: F28F, F28D, F24F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, PAJ, EPODOC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 1336448 A (CENTRE SCIENTIFIQUE ET TECHNIQUE) 7 November 1973 (07.11.1973) <i>figures 1 and 2 with description.</i>	11
Y	<i>figures 1 and 2 with description.</i>	1-10
Y	JP 62225894 A (SHOWA ALUM Corp.) 3 October 1987 (03.10.1987) <i>figure 1 and description.</i>	1-10
X	US 20020005280 A (WITTIG et al.) 17 January 2002 (17.01.2002) <i>figure 1 and description.</i>	11

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

„A“ document defining the general state of the art which is not considered to be of particular relevance

„E“ earlier application or patent but published on or after the international filing date

„L“ document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

„O“ document referring to an oral disclosure, use, exhibition or other means

„P“ document published prior to the international filing date but later than the priority date claimed

„T“ later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

„X“ document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

„Y“ document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

„&“ document member of the same patent family

Date of the actual completion of the international search

7 December 2004 (07.12.2004)

Date of mailing of the international search report

22 December 2004 (22.12.2004)

Name and mailing address of the ISA/AT

Austrian Patent Office
Dresdner Straße 87, A-1200 Vienna

Facsimile No. 1/53424/535

Authorized officer

SCHLECHTER B.

Telephone No. 1/53424/448

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/KR 2002/002263

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
GB	A	1336448	1973-11-07	FR	A	2069950	1971-09-10
				DE	A	2060631	1971-06-16
JP	A	62225894 A2		none			
US	A	20020005 280		none			